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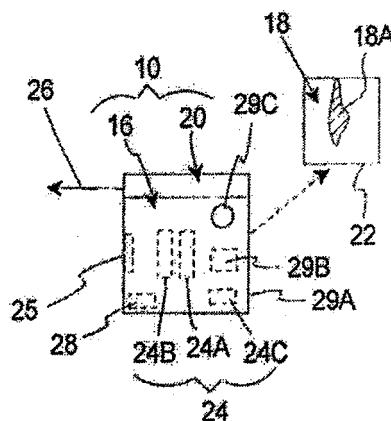
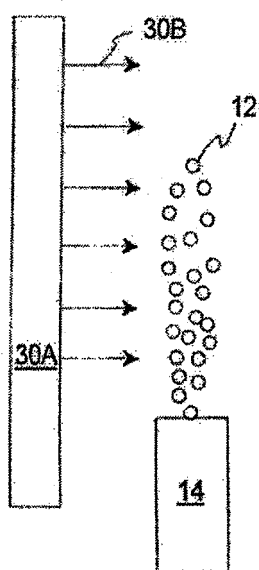
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(54) **Gas imaging system**

(57) An imaging system (10) for imaging an emitting gas (12) includes an imager (16) and a laser source (20). The imager (16) captures an image (18) of light in the mid-infrared (MIR) range. The laser source (20) includes a semiconductor laser (334) that directly emits an output beam (26) that is in the MIR range. The output beam (26)

may be adapted to backscatter near and/or be absorbed by the emitting gas (12). Thus, when an emitting gas (12) is present, the gas (12) may absorb and attenuate the backscattered light. As a result thereof, a shadow or contrast (18A) corresponding to the emitting gas (12) may be visible in the image (18) that is captured by the imager (16).



**Fig. 1**



## EUROPEAN SEARCH REPORT

Application Number  
EP 08 17 1311

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| Category  | Citation of document with indication, where appropriate, of relevant passages                             | Relevant to claim   | CLASSIFICATION OF THE APPLICATION (IPC) |
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|   |   |   | TECHNICAL FIELDS SEARCHED (IPC)         |
|   |   |   | G01M<br>G02B<br>H01S                    |
| The present search report has been drawn up for all claims  |   |   |   |
| Place of search<br><b>The Hague</b>   |   | Date of completion of the search<br><b>5 October 2010</b> | Examiner<br><b>Cilissen, Marcel</b>     |
| <p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone<br/>Y : particularly relevant if combined with another document of the same category<br/>A : technological background<br/>O : non-written disclosure<br/>P : intermediate document</p> <p>T : theory or principle underlying the invention<br/>E : earlier patent document, but published on, or after the filing date<br/>D : document cited in the application<br/>L : document cited for other reasons<br/>&amp; : member of the same patent family, corresponding document</p> |   |   |   |

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EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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